

### **OUTDOOR HEAT PUMPS**

The Challenge: To provide a solution to pool water heating which is reliable and economical, regardless of ambient air temperature and location.

The Certikin range of Calorex heat pumps are specifically designed for swimming pool heating. Heat pumps are recognized as the most sustainable way to economically heat swimming pool water and with a Calorex heat pump you will save on operating costs and reduce your carbon footprint. Calorex Pro-Pac heat pumps are available for both outdoor pool usage, or for indoor pools to enhance the enjoyment of your pool.

### Why Calorex

Calorex are pioneers in the development of heat pumps and have proven performance and reliability for over 30 years. The products are specifically designed for use in swimming pools using the most modern technology and Calorex is approved under ISO 9001 version 2000.

### Why A Heat Pump?

The heat pump is now recognised as the most environmentally friendly method of heating and considering the advantages below it is easy to see why.

- Up to 400% operating cost and carbon saving against direct electric heaters
- Up to 34% operating cost saving against fossil fuel boilers
- · Up to 50% carbon saving against fossil fuel boilers

# Product Features

'Air Off' View

- Titanium heat exchangers
- · Fully automatic
- · Digital controls
- · Quiet in operation
- · Requires very little regular maintenance
- No fumes
- Kind to the environment
- · Economical to run
- Can heat public or private pools to 35°C
- · Easy to retrofit to existing swimming pool systems

Heat pumps simply use the free and natural energy in the air and transfer it efficiently to pool water heating whilst respecting the environment. By careful design a Calorex heat pump is capable of providing your pool with up to five units of absorbed heat for every one unit paid for.

'Air On' View



25°C 20°C 15°C 10°C 5 5 5 7

Free unit of heat from the air

Total units of heat to pool

Total heat to pool divided by energy consumed = Co-efficient of Performance (COP)





### **TECHNICAL SPECIFICATIONS**

| Input & output of Summer<br>Season models at 20°C |         |              | Output kW | Power Consumed<br>kW | Supply Capacity<br>(amps) | Supply Fuse (amps) | Pool water flow rate<br>(I/m) | Pressure drop<br>(m head) | Noise level at 3m<br>(dBA) | Width | Depth | Height | Unpacked Weight |
|---|---------|--------------|-----------|----------------------|---------------------------|--------------------|-------------------------------|---------------------------|----------------------------|-------|-------|--------|-----------------|
|   | AW629AM |              | 9.2       | 2                    | 14                        | 20                 | 115                           | 1.1                       | 50                         | 1050  | 580   | 790    | 97              |
|   | AW829AM |              | 12.5      | 2.5                  | 17                        | 25                 | 115                           | 1.1                       | 51                         | 1230  | 580   | 790    | 108             |
|   | PPT8AL  | 1 PHASE      | 9.2       | 2                    | 14                        | 20                 | 115                           | 2.5                       | 49                         | 1049  | 593   | 720    | 93              |
| Š   | PPT12AL | 3 PHASE 1 PH | 12.5      | 2.5                  | 17                        | 25                 | 115                           | 2.5                       | 50                         | 1227  | 593   | 720    | 104             |
| SEASON  | PPT16AL |              | 15.6      | 2.8                  | 21                        | 30                 | 123                           | 3.5                       | 52                         | 1377  | 602   | 720    | 132             |
|   | PPT22AL |              | 22.4      | 4.3                  | 31                        | 42                 | 123                           | 3.5                       | 55                         | 1377  | 602   | 720    | 133             |
| Ē   | PPT12BL |              | 12.5      | 2.5                  | 6.4                       | 10                 | 115                           | 2.5                       | 50                         | 1227  | 593   | 720    | 104             |
| SUMMER  | PPT16BL |              | 15.6      | 2.8                  | 8                         | 15                 | 123                           | 3.5                       | 52                         | 1377  | 593   | 720    | 132             |
|   | PPT22BL |              | 22.4      | 4.3                  | 13                        | 20                 | 123                           | 3.5                       | 55                         | 1377  | 593   | 720    | 133             |
|   | AW3020B |              | 37        | 9.1                  | 25                        | 35                 | 66                            | 4.5                       | 69                         | 1700  | 1090  | 1212   | 393             |
|   | AW7020B |              | 56        | 13.4                 | 40                        | 50                 | 130                           | 3.9                       | 68                         | 1950  | 1340  | 1212   | 569             |



The 29 Range consists of two single phase models. Their compact form is aesthetically pleasing and can be placed discreetly in the pool area or sited in a plant room. They are quiet, ecologically friendly and economic to run. They come with titanium heat exchangers which are compatible will all types of water treatment. These models are elegant and simple to use. Just set the digital thermostat to ensure fully automatic operation throughout the summer season.

#### Input & output of Extended Season models at 10°C

|          | PPT8ALY  | 1 PHASE | 7.2  | 1.8 | 14  | 20 | 115 | 2.5 | 49 | 1049 | 593  | 720  | 102 |
|----------|----------|---------|------|-----|-----|----|-----|-----|----|------|------|------|-----|
|          | PPT12ALY |         | 9.9  | 2.3 | 17  | 25 | 115 | 2.5 | 50 | 1227 | 593  | 720  | 111 |
| SEASON   | PPT16ALY |         | 12.4 | 2.6 | 21  | 30 | 123 | 3.5 | 52 | 1377 | 602  | 720  | 141 |
| SEA      | PPT22ALY |         | 17.7 | 4.1 | 31  | 42 | 123 | 3.5 | 55 | 1377 | 602  | 720  | 142 |
|          | PPT12BLY | 3 PHASE | 9.9  | 2.3 | 6.4 | 10 | 115 | 2.5 | 50 | 1227 | 593  | 720  | 111 |
| EXTENDED | PPT16BLY |         | 12.4 | 2.6 | 8   | 15 | 123 | 3.5 | 52 | 1377 | 593  | 720  | 141 |
| ×        | PPT22BLY |         | 17.7 | 4.1 | 13  | 20 | 123 | 3.5 | 55 | 1377 | 593  | 720  | 142 |
|          | AW3020BY |         | 26   | 8.6 | 25  | 35 | 66  | 4.5 | 69 | 1700 | 1090 | 1212 | 399 |
|          | AW7020BY |         | 44   | 12  | 40  | 50 | 130 | 3.9 | 68 | 1950 | 1340 | 1212 | 584 |



The Pro-Pac Range are purpose designed for swimming pool heating and can be installed outside or in a plant room. They are highly efficient with a wound tube in tube Titanium condenser and come with a rotary or scroll compressor and water flow switch. They have a remote thermostat control option and can be fitted with a soft start should the installation require and are produced in 8kW to 22kW sizes, in both single and three phase models.





Commercial Pro-Pac Range -Input & output of Summer Season models at 20°C

| 8             | PPT30BM  |                | 32  | 7.8  | 20 | 30  | 123 | 4.2 | 62 | 1555 | 790  | 1080 | 219 |
|---------------|----------|----------------|-----|------|----|-----|-----|-----|----|------|------|------|-----|
| EAS           | PPT45BM  | щ              | 40  | 9.75 | 25 | 35  | 123 | 12  | 64 | 1665 | 1060 | 1310 | 329 |
| ER S          | PPT70BM  | PHASE          | 62  | 14.4 | 42 | 50  | 123 | 14  | 68 | 1810 | 1190 | 1310 | 549 |
| SUMMER SEASON | PPT90BM  | <del>ر</del> م | 80  | 19.5 | 50 | 70  | 246 | 12  | 73 | 2065 | 1190 | 1330 | 599 |
| Sul           | PPT140BM |                | 124 | 29   | 67 | 100 | 246 | 14  | 71 | 2210 | 1650 | 1340 | 858 |

Commercial Pro-Pac Range -Input & output of Extended Season models at 10°C

|           |           |       |      |      |    |     |     |     |    |      | ALLEN |      |     |
|-----------|-----------|-------|------|------|----|-----|-----|-----|----|------|-------|------|-----|
| S         | PPT30BMY  |       | 25.5 | 7.3  | 20 | 30  | 123 | 4.2 | 62 | 1555 | 790   | 1080 | 219 |
| ED SEASON | PPT45BMY  | щ     | 32   | 8    | 25 | 35  | 123 | 12  | 64 | 1665 | 1060  | 1310 | 329 |
|           | PPT70BMY  | PHASE | 50   | 12.5 | 42 | 50  | 123 | 14  | 68 | 1810 | 1190  | 1310 | 549 |
| ENDED     | PPT90BMY  | co    | 64   | 16   | 50 | 70  | 246 | 12  | 73 | 2065 | 1190  | 1330 | 599 |
| X         | PPT140BMY |       | 100  | 25   | 67 | 100 | 246 | 14  | 71 | 2210 | 1650  | 1340 | 858 |

The Pro-Pac Commercial Range are specifically designed to satisfy the needs of larger pools or those with a high level of activity, such as the leisure industry. Strong and reliable, the Pro-Pac Commercial Range includes five models up to 120kW output and are available in summer and reverse cycle all year round models. Pro-Pac units are quiet and easy to use and come with titanium heat exchangers, a flow switch, digital thermostat and vertical ventilation as standard.



## **OUTDOOR HEAT PUMPS SIZING CHARTS**

Note: The sizing graphs shown on this page assume the following UK conditions:

- \* The entire pool is constructed in-ground
- Ground water level is below pool construction.
- Floating heat retention cover is used 20 hrs per day.
- Average depth of water
  @1.3metres.

Pool surface area refers to the total water area (eg inclusive of Roman ends / protruding steps / deck-level drains).

For sizing of equipment outside of these design parameters please consult the technical design team.

Conversion Factor To convert from sq. ft to sq.m multiply by 0.0929.

To convert from sq.m to sq.ft divide by 0.0929.

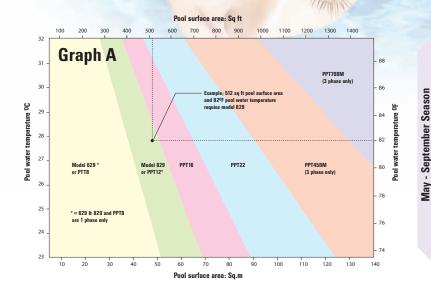
Roman End surface areas:

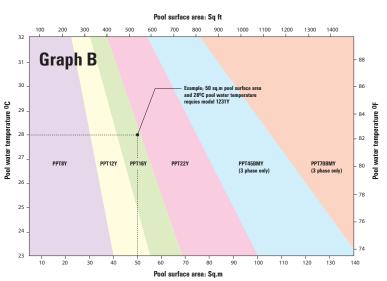
6' = 1.31 sq.m

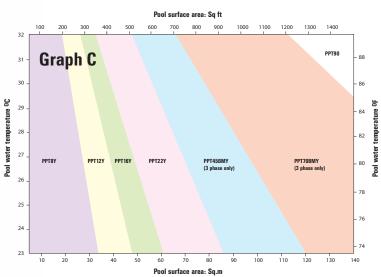
8' = 2.33 sq.m

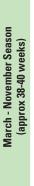
10' = 3.65 sq.m

12' = 5.25 sq.m









April - October Season (approx 30-32 weeks)

(approx 22-24 weeks)



ISO 9001 Registered



